

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of: : May 21, 2007  
Eser Kandogan et al. : Group Art Unit: 2635  
Serial No.: 09/991,140 : Examiner: T. Edwards  
Filed: November 16, 2001 : San Jose, California  
Title: **APPARATUS AND METHOD USING COLOR-CODED OR PATTERN-CODED KEYS IN TWO-KEY INPUT PER CHARACTER TEXT ENTRY**

**REQUEST FOR REHEARING**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

This Request for Rehearing is in response to the Decision on Appeal (“Decision”) decided March 29, 2007, in which the final rejection of all the claims was affirmed. The claims stand rejected as follows:

- (i) Claims 1-25 and 28-37 under 35 USC § 103(a) as being unpatentable over Stone (US Patent 4,555,193), Novel (WO 94/15431), and Smith (US Patent 4,585,908).
- (ii) Claims 26 and 27 under 35 USC § 103(a) as being unpatentable over Stone, Novel, Smith, and further in view of Prame (US Patent 4,988,997).

After carefully considering the Decision, Applicants believe that certain points have been misapprehended or overlooked.

### **Comments on the Board's Analysis of Claim 1**

At issue here are the devices and methodologies of Stone, which is directed to color-coded schemes involving the concurrent actuation of keys. On page 5 of the Decision, the Board stated that:

The Examiner correctly points out that claim 1 does not necessarily require using the same finger to make another selection after the first key selection is made (Answer, 11). The claim merely recites selecting the second key with “the user’s finger or stylus” **which includes using the user’s other finger**...In other words, the claims are not necessarily limited to sequential key strokes using the same finger...(emphasis added)

Applicants believe that the Board has misapprehended the language of Claim 1.

Recall that the pertinent portion of Claim 1 reads as follows:

...by first selecting the first key with **a user’s finger or stylus** and then selecting a key displaying the first marking with **the user’s finger or stylus**... (emphasis added)

Well established, long standing principles of claim interpretation demand that the word “the” be associated with an antecedent, i.e., refer back to the first use of the word or phrase in question. In this case, “the user’s finger or stylus” must refer back to the first use of this phrase. Thus, as noted by Applicants on page 2 of their Reply Brief of June 16, 2006, the finger (or stylus) must be the **same** finger (or stylus) used previously—there is no other finger (or stylus) to which it could refer. (The fact that the typical user has many fingers is irrelevant here for the purpose of claim interpretation—the user might just as well have

more than one stylus from which to choose.) As noted by Applicants on page 2 of their Reply Brief, Claim 1 **does not** read as follows:

...by first selecting the first key with a user's finger or stylus and then selecting a key displaying the first marking with a user's finger or stylus...

However, that is evidently the interpretation that is being given to Applicants' Claim 1! As such, this interpretation would seem to represent a significant departure from conventional norms. It is possible that the Board simply misread Claim 1, or perhaps the Board has interpreted it in accordance with a legal standard unknown to Applicants. If the latter is the case, Applicants earnestly solicit the Board to explain precisely what that legal standard is.

In their Reply Brief, Applicants went on to note on page 2 that "the user's finger or stylus can only be in one place at a time". Thus, with respect to Claim 1, it is not true (as stated on page 5 of the Decision) that "holding the first key while the second key is selected is not precluded..." The devices and methodologies of Stone are clearly distinguished by Claim 1, since, as pointed out on page 14 of Applicants' Appeal Brief of February 14, 2006: "The device of Stone may or may not be usable with one hand, but it is certainly not usable with just one finger!"

### **Comments on the Board's Analysis of the other claims**

In rejecting the other claims, the Board stated on page 5 of its Decision that:

The claims also allow for a broader interpretation that includes using different fingers for key selection or even concurrent key strokes.

Therefore, based on the teachings of Stone, Novel, and Smith outlined *supra*, and to the extent claimed, we agree with the Examiner's position that the claimed key selection reads on the prior art concurrent key selection...

What the Board appears to be saying here is that any claim that does not have language that **specifically and explicitly** excludes the possibility of concurrent actuation of keys is too broad in view of the teaching of Stone and the other prior art. What the Board has evidently overlooked is another possibility, namely, that Applicants' claims are directed to subject matter that is **inherently unsuitable** for use with the concurrent key selection technique of Stone—this point was made by Applicants at various points throughout their Briefs. For example, as noted by Applicants on page 12 of their Appeal Brief:

...standard telephone and cellphone keyboards may be used with Applicants' methodology, but the methodology of Stone can not be applied to these standard keyboards.

It is precisely these keyboards to which Applicants claims are directed, both in general terms (as in the independent claims) and in highly specific terms (as in various ones of the dependent claims). Only keyboards that can be used in a manner consistent with Stone's principle of operation (i.e., concurrent key actuation) can be properly considered to be obvious extensions of Stone; any keyboard having a color-coded scheme that does not lend

itself to be used with concurrent key actuation cannot be properly viewed as an obvious extension of Stone, since those keyboards would require a different principle of operation. MPEP 2143.01 (quoted on page 15 of Applicants' Appeal Brief to make this very point) states that "[t]he proposed modification cannot change the principle of operation of a reference".

Applicants have discussed in some detail in their Appeal Brief (especially pp. 9-16) why Stone and obvious variations thereof cannot possibly overlap with Applicants' claimed subject matter. These arguments are somewhat technical and almost mathematical in nature. As such, they require careful consideration and should ideally be pondered in conjunction with certain figures. However, because these arguments were not specifically addressed by the Board in the Decision, much less rebutted, Applicants are genuinely concerned that they may have been completely overlooked.

Briefly, because Stone relies on the principle of concurrent actuation, the number of symbols appearing on any given key depends on the position of that key in its respective field: In Stone, keys further to the left have more symbols, whereas keys further to the right necessarily have fewer symbols. This is clear from a careful reading of Stone, e.g., Figures 1-2 (included herewith in an Appendix for ease of reference) and column 4, line 64 through column 5, line 2:

...in the horizontal fields 12, 14, 16 the leftmost character on the key is selected by actuating the single key independently of any other. The second character is selected by concurrent actuation with the neighboring key to the right. The third character is selected by concurrent actuation with the key two positions to the right and so on.

In particular, consider the field in Stone that is dedicated to numerals, shown in Figures 1 and 2 of Stone. Note that the number of numerals on the keys **decreases** as one moves along the row from left to right. The most leftward key 12a has four numerals (“1”, “2”, “3”, and “4”), the key 12b to its immediate right has three (“5”, “6”, and “7”), the next key 12c has two (“8” and “9”), and finally the key furthest to the right 20d has just one (“0”). The methodology of Stone demands that the number of numerals on the keys must decrease in this fashion, since keys to the right are used for the purpose of disambiguation.

Note that if the most rightward key 20d were to have, for example, 4 numerals or symbols displayed on it, Stone’s methodology would permit **only one** of these 4 to be selected (e.g., a symbol that was colored black), and that symbol could be chosen by simply selecting the key 20d, just as the blackened numeral “1” is selected by simply selecting the key 12a. However, Stone would not allow any of the other three symbols to be selected. This is because there are no keys to the right of the key 20d that can be used in combination with the key 20d to select additional symbols.

The preceding should be borne in mind when considering whether Stone renders Applicants’ embodiments obvious. In this regard, it is helpful to consider the specific embodiment shown in Figure 10 of Applicants’ specification (included herewith in the Appendix for ease of reference). Note that each of the keys in the far right column of this layout displays a numeral (“3”, “6”, or “9”) along with at least 3 letters. There is no way that Stone’s methodology, however, can be used to select each and every one of the alphanumeric symbols on these three keys, since there is no key to the right of the “3”, “6”, and “9” keys that can provide the needed disambiguation. Indeed, the same problem is

evident for keys in the far left hand column and the middle column of Figure 10. For example, the key bearing the numeral “4” displays 3 letters, but since there are only two keys to the right of the 4-key, the methodology of Stone would permit only 2 of them to be selected. Thus, the methodology and devices of Stone simply can not be applied to Applicants’ preferred embodiment of Figure 10. For analogous reasons, the methodology and devices of Stone can not be extended to any of Applicants’ claimed subject matter, since there would always be at least a few keys having more symbols than Stone’s concurrent key actuation technique could disambiguate.

Accordingly, standard telephone and cellphone keyboards may be used with Applicants’ methodology, whereas the concurrent key actuation methodology of Stone can not be applied to these keyboards. This difference arises because Stone’s concurrent actuation of keys requires that the key providing disambiguation be to the right of the key displaying the desired alphanumeric. In Applicants’ invention, disambiguation is provided by a subsequently selected key that may, for example, lie to the left or to the right of the first selected key (or the first selected key itself may provide any needed disambiguation), thereby permitting more alphanumeric characters to be displayed on a given number of keys.

The fact that certain ones of Applicants’ claims do not specifically and explicitly recite a limitation excluding the possibility of concurrent actuation of keys is not, by itself, determinative. The correct legal standard here is whether combining Stone, Novel and Smith teaches or suggests the claimed subject matter. Without modifying Stone’s operating

principles, Stone cannot be modified to arrive at Applicants' claimed subject matter; accordingly, the subject matter of Applicants' claims is not obvious in view of Stone.

The foregoing problems become extremely acute when one considers the highly detailed nature of the subject matter of certain ones of the dependent claims, e.g., Claims 10, 11, 22, and 32-37. As discussed in the Appeal Brief, the operating principle of Stone (i.e., concurrent key actuation) simply cannot provide the needed disambiguation. Therefore, it cannot be reasonably argued that Stone renders this subject matter obvious.

If the Board finds Applicants' legal reasoning (with respect to Claim 1) or Applicants' technical arguments (with respect to all the claims) incorrect, some explanation as to why is earnestly solicited and would be greatly appreciated in the event that Applicants need to pursue further prosecution of this case.

Respectfully submitted,

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## **APPENDIX:**

Figure 1 of Stone

Figure 2 of Stone

Figure 10 of Applicants' application

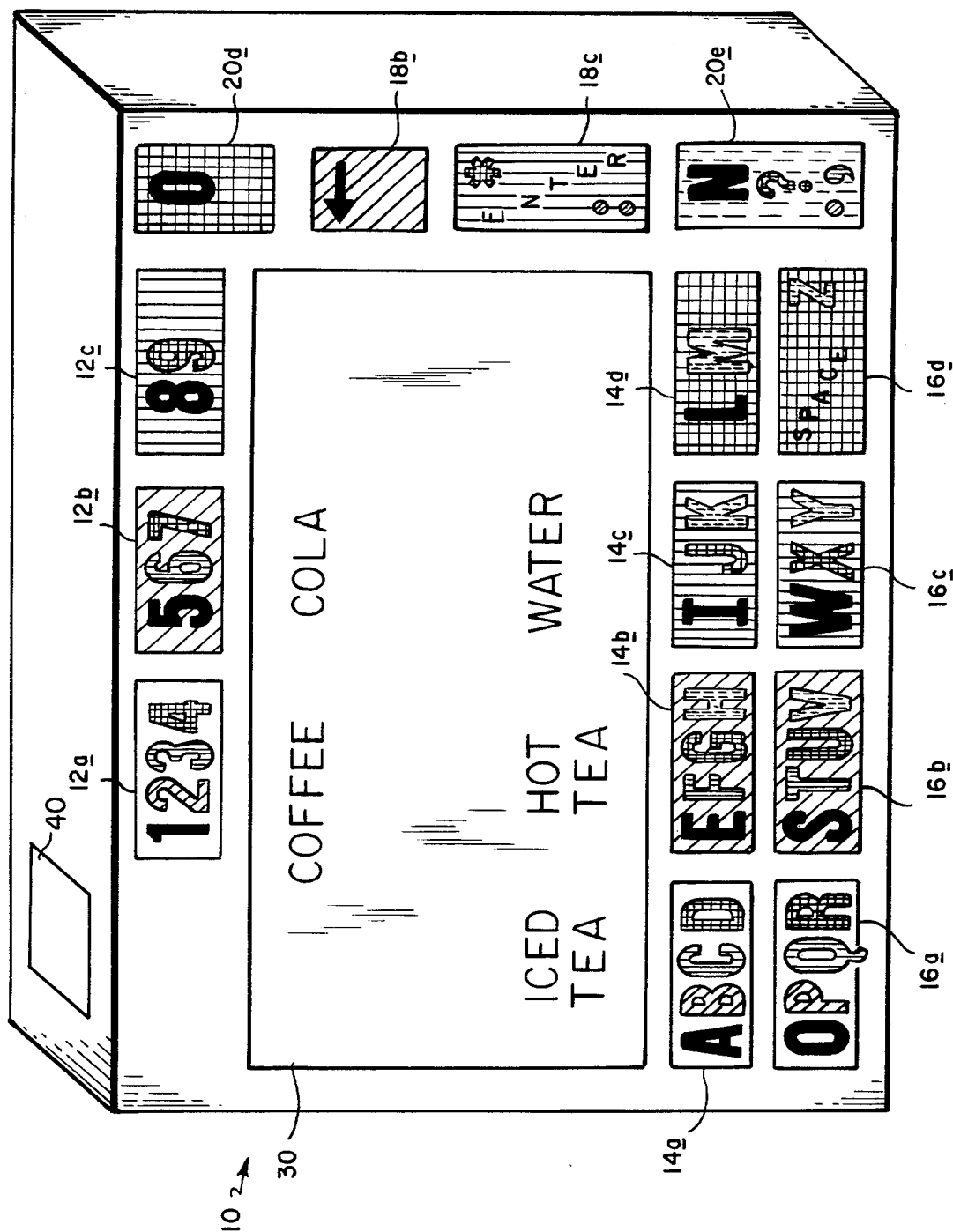


FIG. 1

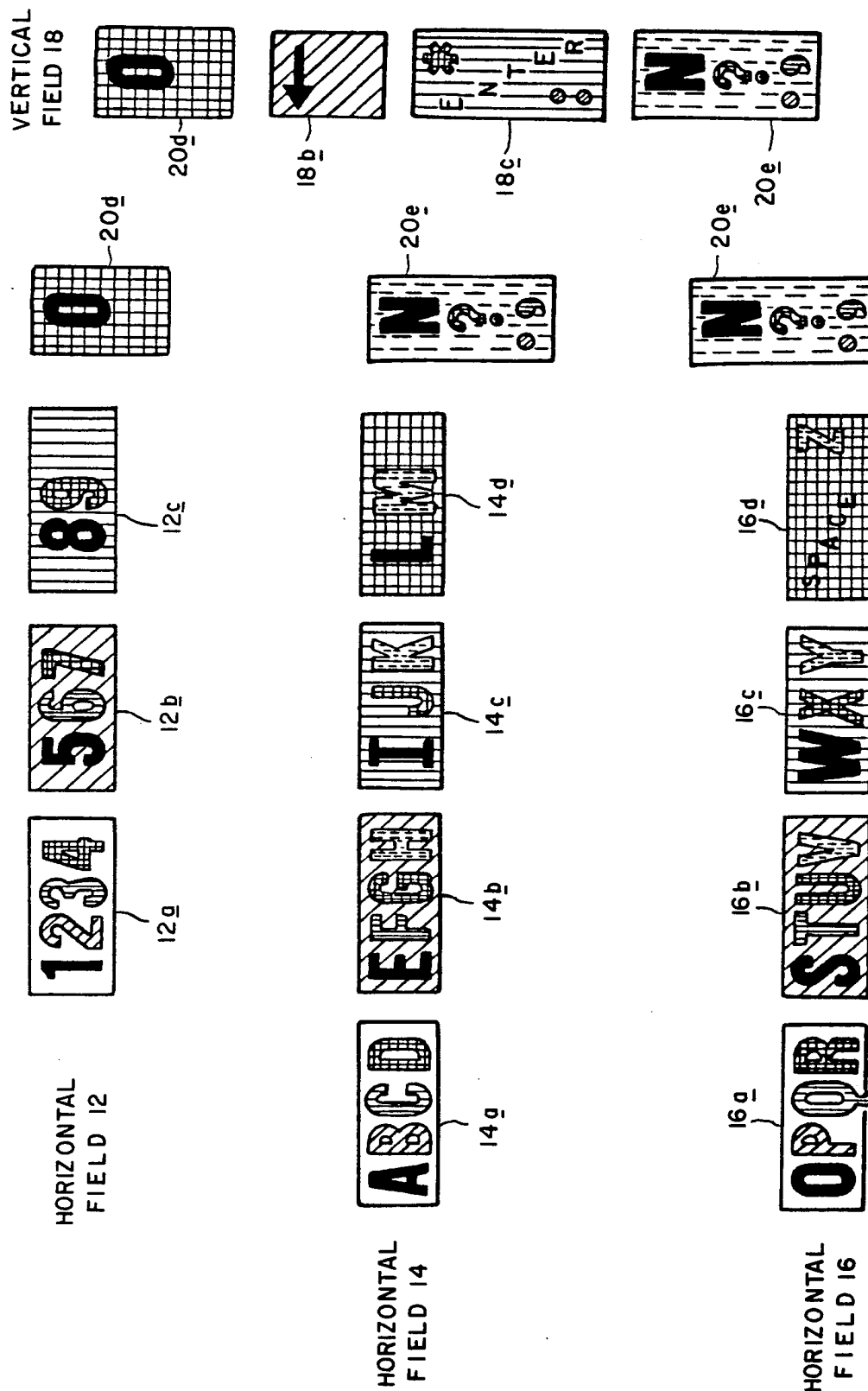


FIG. 2

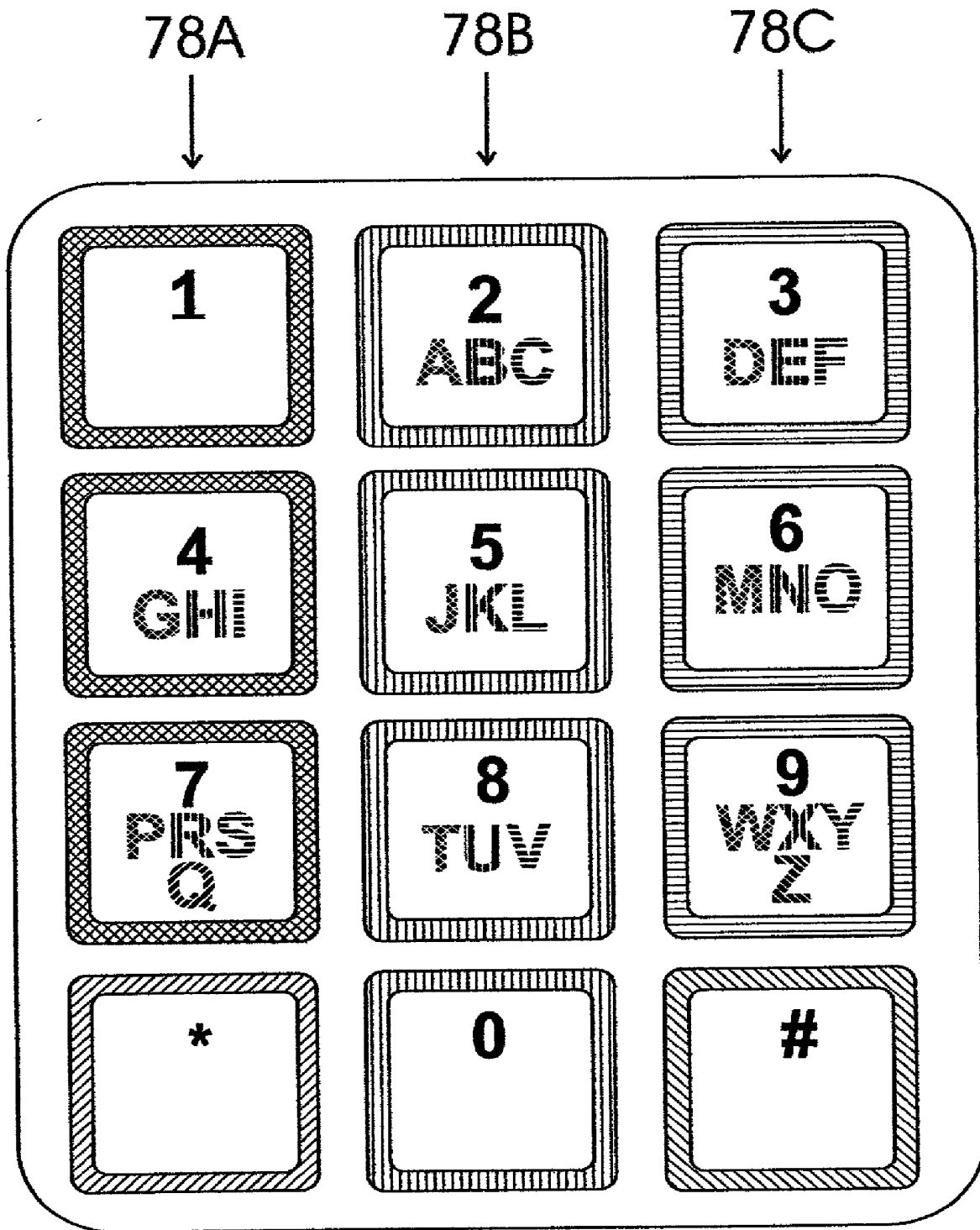


FIG. 10